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<b>14. ABSTRACT</b> Space capabilities are no longer novelties, rather, they are vitally important to the joint warfighter at every level. While there is very little debate about the ever-increasing significance or usefulness of space to the joint warfighter, the command and control (C2) of space forces at the operational level has been an evolutionary challenge with the creation of the Director of Space Forces (DIRSPACEFOR) during Operation IRAQI FREEDOM. While the construct has worked well in OIF, the doctrinal disposition of the DIRSPACEFOR has been inhibited by the fact that it is seen as an Air Force solution. In order to move forward on the DIRSPACEFOR construct, this paper uncovers the underlying parochial motivations that are hindering progress, thus enabling a clear perspective for the way ahead focused on unity of effort. This paper does not attempt to solve the parochial inclinations or even dictate the best C2 structure; instead, it reframes the polarizing issues surrounding the DIRSPACEFOR position to appropriately concentrate on the unique nature of space requirements and missions, rather than on the medium and ownership. Unity of effort, not an unrealistic unity of command, must be the mandate. This paper recommends incorporation of a revamped joint, inter-agency DIRSPACEFOR-like construct centered on unity of effort, while reinforcing the flexibility of the joint force commander (JFC) to structure space forces based upon the mission, not presumed ownership.								
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**NAVAL WAR COLLEGE  
Newport, RI**

**DIRECTOR OF SPACE FORCES:  
REFOCUSED FOR THE WAY AHEAD**

**By**

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**A paper submitted to the faculty of the Naval War College in partial satisfaction  
of the requirements of the Department of Joint Military Operations.**

**The contents of this paper reflect my own personal views and are not necessarily  
endorsed by the Naval War College, the Department of the Air Force, or the  
Department of the Navy.**

**Signature:** \_\_\_\_\_

**13 February 2006**

## **Abstract**

Space capabilities are no longer novelties, rather, they are vitally important to the joint warfighter at every level. While there is very little debate about the ever-increasing significance or usefulness of space to the joint warfighter, the command and control (C2) of space forces at the operational level has been an evolutionary challenge with the creation of the Director of Space Forces (DIRSPACEFOR) during Operation IRAQI FREEDOM. While the construct has worked well in OIF, the doctrinal disposition of the DIRSPACEFOR has been inhibited by the fact that it is seen as an Air Force solution. In order to move forward on the DIRSPACEFOR construct, this paper uncovers the underlying parochial motivations that are hindering progress, thus enabling a clear perspective for the way ahead focused on unity of effort. This paper does not attempt to solve the parochial inclinations or even dictate the best C2 structure; instead, it reframes the polarizing issues surrounding the DIRSPACEFOR position to appropriately concentrate on the unique nature of space requirements and missions, rather than on the medium and ownership. Unity of effort, not an unrealistic unity of command, must be the mandate. This paper recommends incorporation of a revamped joint, inter-agency DIRSPACEFOR-like construct centered on unity of effort, while reinforcing the flexibility of the joint force commander (JFC) to structure space forces based upon the mission, not presumed ownership.

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The military cannot undertake any major operation, anywhere in the world, without relying on systems in space.

Phase III Report of the U.S. Commission on National Security/21<sup>st</sup> Century<sup>1</sup>

## INTRODUCTION

Space capabilities are no longer novelties, rather, they are vitally important to the joint warfighter at every level. From a satellite-enabled blue-force tracking device on an individual soldier in a firefight to a networked constellation of space-based systems providing global early warning for homeland defense, the ultimate high ground provides space effects that are integrated into nearly every facet of military operations across the entire spectrum of conflict. Increasingly, space capabilities are not just “interoperable,” but are truly “interdependent.”<sup>2</sup> This means synchronized, persistent, and focused space capabilities not only enhance, but are in fact *required*, as key warfighter elements to deliver a full range of combat effects. This “interdependence” has been unmistakably evident in daily Operation IRAQI FREEDOM (OIF) efforts, including numerous combat search and rescue operations. Space provided aircrew location information, secure communications, and even surface-to-air threat information directly to rescue aircraft. As General John Jumper, former Air Force Chief of Staff, said, “space took the search out of search and rescue.”<sup>3</sup>

While there is very little debate about the ever-increasing significance or usefulness of space to the joint warfighter, the command and control (C2) of space forces at the operational level has been an evolutionary challenge during OIF. Joint Publication (JP) 3-14, the first *Joint Doctrine for Space Operations*, was signed in August 2002 after a difficult eleven-year development, however, many of the relationships and responsibilities of theater space resources were not articulated definitively. During OIF, the Air Force leadership took an aggressive role in revamping theater space forces, the most significant change being the creation of a Director of Space Forces (DIRSPACEFOR). While the construct has worked

increasingly well in U.S. Central Command (USCENTCOM) during OIF, the position is largely viewed as an Air Force solution and has not been accepted as a joint construct for C2 of theater space forces. The doctrinal disposition of the DIRSPACEFOR position has become the central topic for debate in the recent dialogue on the rewrite of JP 3-14.

In order to move forward on the DIRSPACEFOR construct for JP 3-14, this paper uncovers the underlying parochial motivations that are hindering progress, thus enabling a clear perspective for the way ahead focused on unity of effort. This paper will not attempt to solve the parochial inclinations or even dictate the best C2 structure; instead, it will reframe the polarizing issues surrounding the DIRSPACEFOR position to appropriately concentrate on the unique nature of space requirements and missions, rather than on the medium and ownership. Unity of effort, not an unrealistic unity of command, must be the mandate across the very diverse joint, interagency, multi-mission space force. The way ahead on the DIRSPACEFOR must capture these fundamental principles. Joint Pub 3-14 should incorporate a revamped joint, inter-agency DIRSPACEFOR-like construct centered on unity of effort, while reinforcing the flexibility of the joint force commander (JFC) to structure space forces based upon the mission, not presumed ownership.

In order to conduct this analysis, it is first necessary to provide the current policy and organizational perspective on the medium of space, and then take a quick look at emerging systems and mission areas that will heighten the importance of optimal operational C2 in the near future. Next, the evolution of the existing joint and service space doctrine will be reviewed along with the lessons learned from OIF. This will provide the foundation to assess the underlying issues motivating the current doctrine debate, thus enabling a reframing of the debate in order to furnish a vision for the way ahead. To begin, it is necessary to define some key space terms.

## **SPACE TERMS**

*Space forces* are “the space and terrestrial systems, equipment, facilities, organizations, and personnel necessary to access, use, and if directed, control space for national security.”<sup>4</sup> The space forces of the United States are spread across multiple military services, government agencies, and even commercial corporations and provide space capabilities extending beyond only traditional military missions. Further, *defense space* refers to the Services of the Department of Defense. While each of the Services have space forces, approximately 90% of the \$10 billion annual Department of Defense space-related budget resides in the Air Force.<sup>5</sup> *Intelligence space* refers to the intelligence community. While specific figures are classified, the “classified counterpart [to the DoD] is presumably larger.”<sup>6</sup> These separate entities are often referred to as “white” and “black” space, respectively, and together comprise *national security space*.<sup>7</sup> These terms and the differentiations will be critical for the operational C2 issues to be analyzed in this paper.

## **SPACE CHANGES AND CHALLENGES**

The Air Force has struggled with the proper definition of space and its relationship to the air medium since the 1950s. Should air and space be treated as two separate and distinct operating mediums or as a single, continuous “aerospace” continuum?<sup>8</sup> The Commission to Assess United States National Security Space Management and Organization, or simply the “Space Commission,” addressed this issue definitively in 2001, “Space is not simply a place from which information is acquired and transmitted or through which objects pass. It is a medium much the same as air, land or sea.”<sup>9</sup> The Air Force subsequently abandoned the “aerospace” term and reverted to “air and space” in both its doctrine and vernacular.

Further, while the Air Force has historically invested the vast majority of the Service funds towards military space capabilities, the Air Force did not receive formal responsibility

for military space until the Space Commission recommendations were implemented. Not only was the Secretary of the Air Force designated the DoD Executive Agent for Space, but the Air Force was also in effect given two distinct mission areas—air and space.<sup>10</sup> Additionally, the Under Secretary of the Air Force (USECAF) was “dual-hatted” as the Director of the National Reconnaissance Office, which acquires and operates “black” space systems for the intelligence community.

At the surface, many of the issues of responsibility and ownership of national security space appeared to have been resolved with the implementation of the Space Commission recommendations. However, a few key considerations must be highlighted in the context of C2 of space forces. While the USECAF was placed in charge of funding and procurement oversight for all national security space, the distinctly different operations of “black” and “white” space systems remain separated.

Many of the military space capabilities must be viewed as utilities. For instance, users can “plug in” to space utilities for precision navigation, global communications, weather products, and missile warning. These utilities are critically important to the joint warfighter, but they are largely static, or scheduled, and not user-driven capabilities.<sup>11</sup> As Lieutenant General Larry J. Dodgen, the Commander of Army Space and Missile Defense Command (SMDC), reinforces “The bottom line is that we can no more imagine a day without the capabilities provided by space-based products and services than we can imagine a day without on-demand access to water and electricity.”<sup>12</sup>

The intelligence space capabilities, on the other hand, are generally much more taskable and must be focused on specific areas based upon planned and real-time requirements. While the NRO acquires and operates the nation’s classified satellites, other government agencies such as the National Security Agency, National Geospatial-Intelligence

Agency, and Defense Intelligence Agency actually direct the payloads and collection priorities. The focus of these space capabilities has historically been on strategic intelligence for national consumers. As Peter Teets, the former Undersecretary of the Air Force, revealed:

The NRO has operated as a national agency collecting national intelligence. I think it has only been recently that we've started to really find ways to get intelligence collected by NRO assets into the hands of warfighters direct...for a long time it was a huge struggle to get nationally collected information into the hands of the warfighter.<sup>13</sup>

The vital takeaway is that the military has command and control of only a small percentage of the space systems that actually support military operations.<sup>14</sup>

These paradigms of utilities vs. user-driven capabilities are changing, however. Many of the planned Air Force systems are evolving into dynamically tasked systems. For instance, the Space-Based Infrared System (SBIRS) must be commanded to detect and track multiple, individual targets. Even GPS will have the ability to focus signal power in limited areas for improved jamming resistance in follow-on architectures. The new Space Radar program further demonstrates the planned convergence towards increasingly joint, interagency, and dynamic systems for the military and intelligence community needs. The Secretary of Defense and Director of the Central Intelligence Agency have designated Space Radar as the first “dual-use” system—the first of its kind for the United States.<sup>15</sup> As another indicator of moving towards bridging both mediums and agencies, one of the eight Quadrennial Defense Review follow-on assessments has been tasked to chart an execution roadmap for the “Sensor-based management of the ISR enterprise.”<sup>16</sup> The intelligence and military communities will always have different requirements for space systems and serve different customers, however, these examples illustrate how operational integration and deliberate command and control are the mandates for the future.

While the aforementioned force enhancement missions are clearly evolving, another separate mission area—space control—is still in its infancy. Some may believe “space superiority” is just a premature parallel to “air superiority,” but the attempts by Iraq to jam the Global Positioning System (GPS) signal during OIF and the Cuban-based jamming of Voice of America satellite broadcasts into Iran are clear examples of why U.S. space forces are threatened and must be protected.<sup>17</sup> By definition, *space control* “ensures freedom of action in space for the United States and its allies and, when directed, denies an adversary freedom of action in space.”<sup>18</sup> The threat ranges from major powers with kinetic anti-satellite weapons to lone actors with commercially available radio frequency jamming equipment. As both the importance of space to the United States and the likelihood of attack by adversaries increase, this mission area will continue to gain the attention of combatant commanders—and the operational C2 structure will be paramount.

## **SPACE DOCTRINE EVOLUTION**

Both joint and service doctrine for space operations have evolved significantly in the post-Space Commission, post-September 11<sup>th</sup> era. Some doctrinal insights were extracted from lessons learned in CENTCOM, while other constructs were actually combat-tested in OIF. By chronologically stepping through the evolutions of both doctrinal and operational perspectives, the current landscape can then be assessed in the proper context.

The release of the updated Air Force Doctrine Document (AFDD) 2-2, *Space Operations*, in November 2001 began the evolution. The Air Force leaned forward very aggressively on numerous concepts that were not agreed upon by the other services. It introduced the construct of a joint force air *and space* component commander (JFASCC). It pressed even further by advocating for specific JFC-assigned duties to the JFASCC.<sup>19</sup> AFDD 2-2 states, “The COMAFFOR/JFASCC should normally hold key roles within the JTF for

space operations: the coordinating authority for space and the supported commander for joint space operations assigned by the JFC.”<sup>20</sup> *Coordinating authority* is a joint term defined as:

A commander or individual assigned responsibility for coordinating specific functions or activities involving forces of two or more joint force components. The commander or individual has the authority to require consultation between agencies involved, but does not have the authority to compel agreement....Coordinating authority is a consultation relationship, not an authority through which command may be exercised.<sup>21</sup>

The Air Force effectively created a new coordinating authority for space and went even further to state, “A JFASCC may require a space officer dedicated to carry out the detailed responsibilities associated with the coordination role.”<sup>22</sup> This dedicated space officer construct was coined the “senior space officer” or SSO.<sup>23</sup> Collectively, the designation of a JFASCC and the strong advocacy for assignment of coordinating authority for space to the COMAFFOR/JFASCC by the Air Force were significant issues leading into the final iterations of Joint Pub 3-14, *Joint Doctrine for Space Operations*.

After nearly eleven years in development, JP 3-14 was finally signed in August 2002. It diverges from the “coordinating authority for space” terminology used in AFDD 2-2:

A supported joint force commander (JFC) normally designates a single authority to coordinate joint theater space operations and integrate space capabilities. Based on the complexity and scope of operations, the JFC can either retain authority or designate a component commander to coordinate and integrate space operations. The JFC considers the mission, nature and duration of the operation, preponderance of space force capabilities, and the command and control capabilities (including reach-back) in selecting the appropriate option....To facilitate unity of the theater/joint operations area (JOA) space effort, the supported combatant commander or a joint force commander (JFC) may designate a space authority.<sup>24</sup>

Also, the joint pub did not recognize the Air Force construct of a JFASCC or the presumption that any one component should have the space authority role. Although JP 3-14 does not specifically rule out a separate component for space, it reinforces, “The coordinating authority [for space] typically will be the joint force air component commander, joint force land component commander, or joint force maritime component commander.”<sup>25</sup> On a less

contentious front, JP 3-14 revalidates that most space forces are global in nature and provide effects to multiple theaters, thus “During mission execution, Commander, USSPACECOM [USSTRATCOM] will normally retain OPCON of assigned military space forces through component commanders.”<sup>26</sup>

Both the significant disconnects and the lack of clarity between Air Force doctrine and joint doctrine were soon tested in combat operations in OIF. The SSO executed his duties on the special staff of the CFACC/COMAFFOR during the early stages of OIF.<sup>27</sup> While the JFC elected to retain space authority during Operation ENDURING FREEDOM, the decision to actually delegate space authority was not made until one day before the air campaign started in Iraq, when CENTCOM issued fragmentary order (FRAGO) on 18 March 2003 designating the CFACC as the Space Coordinating Authority.<sup>28</sup> The lack of clarity in the doctrine and the last minute decision by CENTCOM resulted in a sub-optimal C2 construct as the space forces did not fight as they had exercised.<sup>29</sup> Air Force leaders recognized there was room for improvement and tasked Headquarters Air Force Space Command (HQ AFSPC) and the Air Force Doctrine Center (AFDC) to further develop the SSO construct for the Air Force Doctrine Summit IV in November 2003.<sup>30</sup> This resulted in another action to HQ AFSPC to develop a “red team” to investigate an option similar to the Director of Air Mobility Forces (DIRMOBFOR). It is important to note that although multiple Air Force commands, centers, and Air Staff organizations participated in the “red team,” it was an exclusively Air Force effort.

The senior Air Force leaders approved the new Director of Space Forces, or DIRSPACEFOR, at their planned CORONA South meeting in February 2004. The clear parallels to the DIRMOBFOR were deliberate. Joint Pub 3-17, states “intratheater air mobility forces assigned, attached, or made available...should be organized under

Commander, Air Force Forces (COMAFFOR) as appropriate and directed by DIRMObFOR through an AOC for optimum allocation, efficiency, and effectiveness.”<sup>31</sup> Similarly, the DIRSPACEFOR coordinates AF theater space needs and assists coordination of joint theater space requirements in the AOC. One important distinction is that while the DIRMObFOR has the authority to direct the Air Mobility Division in the AOC, the DIRSPACEFOR does not have a corresponding space division. Space officers are typically spread throughout AOC to support all the divisions. Hence, the DIRSPACEFOR only acts on behalf of the COMAFFOR and does not have the authority to “direct” any forces within this construct.<sup>32</sup> The first designated DIRSPACEFOR served in CENTCOM in May 2004.<sup>33</sup>

The Air Force was eager to codify the new DIRSPACEFOR paradigm in doctrine and the timing was impeccable, as it was able to insert the new DIRSPACEFOR details into the draft AFDD 2-2.1, *Counterspace Operations*, which was signed in August 2004. AFDD 2-2.1 deliberately states, “The DIRSPACEFOR serves as the senior space advisor to the COMAFFOR or COMAFFOR/JFACC.”<sup>34</sup> This is particularly important since it clearly defines the DIRSPACEFOR as an Air Force asset, and further states the DIRSPACEFOR “Acts as COMAFFOR/JFACC’s representative to the SCA if the authority resides with the JFC or another component.”<sup>35</sup> The DIRSPACEFOR’s responsibilities, as written, all rely on the authority of the COMAFFOR/JFACC (if delegated space coordinating authority).

**Table 1: DIRSPACEFOR Responsibilities (AFDD 2-2.1)<sup>36</sup>**

<ul style="list-style-type: none"><li>• Recommend appropriate command relationships for space to the COMAFFOR/JFACC</li><li>• Provide assistance to COMAFFOR/JFACC in establishing and prioritizing military space requirements required by the JFC and the policies for employing those space capabilities</li><li>• Provide senior space perspective for strategy and daily COMAFFOR/JFACC guidance development, target selection, and force enhancement to terrestrial operations</li><li>• Direct and monitor, on behalf of the COMAFFOR/JFACC, space forces and capabilities assigned or attached to the COMAFFOR/JFACC, including space-related special technical operations; includes space forces made available for tasking with specification of TACON to the COMAFFOR/JFACC</li><li>• Facilitate and coordinate AFSPC, USSTRATCOM, Service, and agency support to the COMAFFOR/JFACC—coordinate vertical, horizontal, and reachback activities with the space AOC and other component space support teams and liaisons as necessary; assist/recommend DIRLAUTH relationships to execute time-sensitive requests for space support</li><li>• Execute day-to-day SCA responsibilities, on behalf of the COMAFFOR/JFACC, as directed</li><li>• Act as COMAFFOR/JFACC's representative to the SCA if the authority resides with the JFC or another component</li><li>• Accomplish other duties as assigned by the COMAFFOR/JFACC</li></ul>
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The final doctrine document to examine is the new Army Field Manual 3-14, *Space Support to Army Operations*, dated May 2005.<sup>37</sup> As the name implies, the primary focus of Army space operations is to support Army operations. This support is provided via organic Space Support Elements (SSEs) and Army Space Support Teams (ARSSTs) of up to six Army space professionals.<sup>38</sup> FM 3-14 formally recognizes that the COMARFOR/JFLCC can be designated the space authority and outlines the responsibilities. Additionally, it also states, “the Commanding General, USASMD/ARSTRAT may designate an Army space coordination authority in support of the ASCC [Army Service Component Commander] for the regional combatant commander, Army forces (ARFOR), or JFLCC and the theater space authority.”<sup>39</sup> This statement is vital since it states ARSTRAT may elect to designate an Army SCA, arguably equivalent to the AF DIRSPACEFOR, to support the Army.

## CURRENT DOCTRINE DEBATE

Even with relatively new joint and service space doctrine on the shelf and years of combat-proven space operations support under the belt, the joint space community is heating up for a new battle—the rewrite of Joint Pub 3-14! Instead of moving towards a common perspective on theater space operations, the Services, commands, and key players are staking claims and fortifying positions. While there are some additional peripheral issues, most of the debate is focused on the DIRSPACEFOR position and its disposition for the future. This will be the central focus area in this analysis.

During OIF, the Air Force developed and implemented the DIRSPACEFOR construct solely within Air Force channels. The Air Force leadership directed the “red team” and approved the construct at an Air Force CORONA leadership conference. This is clearly within a service’s prerogative to adapt and organize, however, the position eventually was designated as a joint position in CENTCOM. According to Air Force Colonel Michael Carey, the CENTCOM DIRSPACEFOR in early 2005:

...the fact that I was seen as an Air Force advisor only to some created friction and detracted from timely coordination on some space issues which were relevant to accomplishing objectives set forth by the supported commander, General George W. Casey, Jr., commander, Multi-National Forces – Iraq (MNF-I). The CFACC, Lt Gen Walter E. Buchanan III, recognized this problem and directed I be named the Joint DIRSPACEFOR...<sup>40</sup>

Clearly, the appropriateness and necessity of designating a Joint DIRSPACEFOR in CENTCOM could be debated, however, the real issue for the space community has been whether this CENTCOM-specific solution should be codified into joint doctrine as a standardized solution.

The Air Force has taken an aggressive “lead-turn” posture in development of space doctrine in the past and is proceeding in the same manner for the JP 3-14 rewrite. By *leading*

the process with concepts such as the DIRSPACEFOR, the joint force air *and space* component commander, the Air *and Space* Operations Center (AOC), and the space coordinating authority in AFDD 2-2 and 2-2.1, the Air Force seemingly expects the joint publication to adopt (or *turn*) the same constructs and succumb to the reality that the Air Force should lead space operational C2 in the theater of operations. The Army and Navy are vehemently opposed to such a presupposition, and have forwarded their own arguments for ownership of theater space C2.

While the Army and Navy cannot challenge the Air Force's clear preponderance of space assets, they have brought attention to the numbers of users and operators in theater as another criterion for component ownership of theater C2.<sup>41</sup> Even Undersecretary Teets acknowledged, "Well, the Army, in its own words, defines itself as being the largest user of Space assets. And from the point of view of numbers of people, it clearly is."<sup>42</sup> According to Colonel J. Kevin McLaughlin, the current CENTCOM DIRSPACEFOR, the Army not only has the most users, but actually has the most space operators in theater as well when the embedded SSEs are included in the calculation.<sup>43</sup> The Navy has suggested that the SCA and DIRSPACEFOR should even reside with the JFMCC for sea basing and transition to the JFLCC as forces move ashore.<sup>44</sup>

Perhaps the most inflammatory ownership position is the one held by the Air Force. It seems to be asking for confrontation when on one hand, the DIRSPACEFOR should be a joint position; but on the other hand, it is a COMAFFOR staff asset even if the COMAFFOR has not been designated the JFACC and/or SCA.<sup>45</sup>

Clearly, the Services are posturing for organizational ownership justifications in the joint disposition of the DIRSPACEFOR construct, rather than remaining focused on the true goal of improved operational C2 of space forces for the joint warfighter. This underlying

service parochialism and the associated suspicions of sister service motivations are the real crux of the issue and must be understood to move forward.

## UNDERLYING ISSUES

The Air Force is arguably the largest perpetrator of service parochialism with respect to space, which originates from the presumed ownership of the medium of space and the subsequent relationship between air and space. AFDD 1, *Air Force Basic Doctrine*, warns:

Doctrine is about using mediums...not owning mediums. This illustrates the importance of properly using a medium to obtain the best warfighting effects, not carving up the battlespace based on Service or functional parochialism. Focusing on using a medium is a vital first step to integration of efforts. “Ownership” arguments eventually lead to suboptimal (and usually at best tactical) application of efforts at the expense of the larger, total effort.<sup>46</sup>

No one can challenge the Air Force’s tremendous investments in the medium of space, often at the expense of potential investments in the air mission. There is no question that the AF has been a good steward of space and that stewardship continues as the executive agent for space. The root of the problem, however, is the relationship between air and space. The underlying cause seems to be ironically outlined in the same AFDD 1 doctrine:

Air and space are separate domains requiring exploitation of different sets of physical laws to operate in, but are linked by the effects they can produce together. By using the phrase “air and space” instead of “aerospace” we acknowledge the inherent differences in the two media and the associated technical and policy-related realities without deviating from our vision. To achieve a common purpose, “air” and “space” need to be integrated.<sup>47</sup>

Once again, few would argue that integration of air and space is problematic. After all, it is vitally important that the Air Force’s aircraft and space assets are integrated in every aspect of warfighting. The issue is that space is predominantly a force enhancer across *all* the other mediums and associated warfighting missions, not just the Air Force’s air mission. As an Army colonel at SMDC once warned:

The increased responsibility and authority given to the Air Force...must be balanced by increased oversight from the commander in chief of US Space Command [now

USSTRATCOM], the Joint Chiefs of Staff, and [the Office of the Secretary of Defense]. Without this oversight, there is potential that space could become focused on support to a single service, its style of warfighting, and to its priorities. This would be contrary to the best interests of the Army.<sup>48</sup>

The concern is that if the Air Force owns over 90% of the DoD space budget, then the Air Force may, consciously or subconsciously, spend a disproportionately high share of the military's space capabilities on integrating space *only* to air. As the executive agent for space, the Air Force must directly support the missions of other services, and this can create tension when both performance and motivations are questioned. As Lt Gen Dodgen recently commented, future combat capabilities in the Army are “dependent upon things that will be there in space.” On the readiness of AF systems like SBIRS to support the Army theater missile warning mission, he simply said, “I have severe doubts whether or not.”<sup>49</sup>

Further examples of the disproportionate focus on air and space integration are plentiful. AFSPC sends its best and brightest space operations officers to the AF’s premiere warfighting school, the USAF Weapons School at Nellis AFB, to primarily learn about air weapon systems and hone space enhancement to such missions. The graduates, known as “Whiskies,” are then dispersed to AOCs with a disproportionate knowledge and focus on air. Elements of AFSPC’s Space Warfare Center are also combining with Air Combat Command’s (ACC) Air Warfare Center “to better meet operational requirements for air, space and information operations, ensuring the Air Force continues to provide quality stewardship for America’s warfighting assets” according to General Lance Lord, Commander AFSPC.<sup>50</sup> However, the newly designated “USAF Warfare Center” will remain under ACC and further exemplifies the focus on air and space integration. Finally, the fact that AF aircrews and space operators alike wear the same flight suits may appear as service unity to some, but is often construed as proof of air and space incest to others.

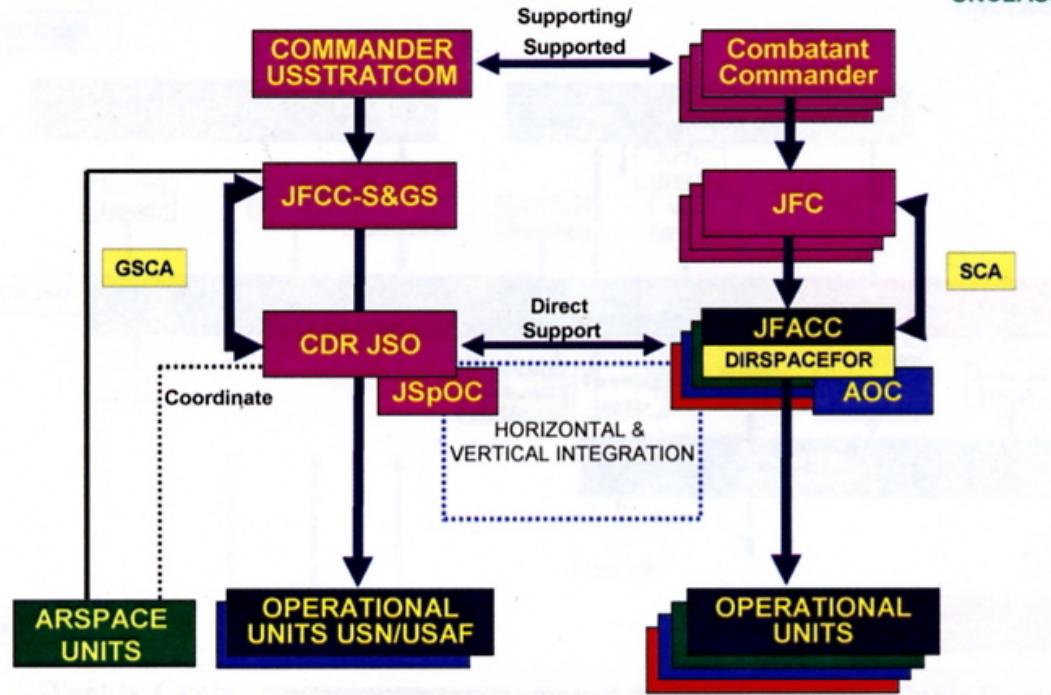
## COUNTER: AIR AND SPACE INTEGRATION A NECESSARY STEP TO JOINT?

The common defense to the strong Air Force emphasis on “air and space integration” is that such integration is not an end in-and-of-itself, rather, it is merely a logical first step to true joint integration across all the mediums. As Colonel Carey suggested, “We need to get it right with the Air Force first, then take it joint.”<sup>51</sup> This philosophy is evident in many successes. For instance, the now common practice of delivering space-derived intelligence for targeting directly into weapon systems evolved from initiatives tested during quarterly Red Flag exercises at Nellis AFB.<sup>52</sup> However, evolving air-space technology to joint applications is fundamentally different than evolving organizations from AF-centric to joint.

Such space organizational evolutions are common practice. The USAF Space Operations School was activated in 2001 but evolved into the National Security Space Institute (NSSI) in 2004 with a modest, but growing joint emphasis. A similar, but much more significant, evolution of an Air Force unit into a joint organization was implemented in the recent restructuring of USSTRATCOM. Under the new Joint Functional Component Command for Space and Global Strike (JFCC-SGS), the new Commander Joint Space Operations (CDRJSO) was delegated operational control (OPCON) of all of the nation’s military space missions and also designated the global space coordinating authority (GSCA). In practice, the 14<sup>th</sup> Air Force Commander was just given another “purple” hat and control of Army and Navy space assets did not change significantly.<sup>53</sup> Perhaps the best example of the Air Force putting a “purple coating” on an Air Force unit was in the formal redesignation of the AF’s Air and Space Operations Center, or “Space AOC,” at Vandenberg AFB as the *Joint Space Operations Center* (coined JSpOC) in May 2005.<sup>54</sup> The 270-person organization has fewer than ten non-AF personnel and is “joint” in name only.<sup>55</sup> The Army in particular has resisted this construct as depicted in Figure 1. Clearly, the designation of the

CENTCOM DIRSPACEFOR as a “joint” position generates similar suspicion or “artificial purple coating,” even if it may in fact be the right approach.

**Figure 1. Adapted C2 Diagram from Joint Space Operations Center Brief<sup>56</sup>**



This brings the discussion back to the DIRSPACEFOR position within the context of the larger issue of the proper C2 construct for theater space operations. Now that the underlying service ownership and air and space integration issues have been identified, it is necessary to refocus the JP 3-14 debate on the way ahead for the DIRSPACEFOR.

### REFOCUS: THE WAY AHEAD

The best way for the DIRSPACEFOR debate to move forward is by properly refocusing on a two key principles that will reframe the JP 3-14 debate.

First, the inappropriate obsession with the medium and ownership of space must be replaced by a genuine commitment to the unique nature of space requirements and missions. No one service owns the space medium or the theater space mission. Regardless of where the SCA resides—in a component or at the JFC level—it should never be owned. The Air

Force will likely always have the preponderance of military space assets, but the air component should never be the mandated solution. The focus must be on the mission of the JTF, the users, and the space forces available. As such, space professionals must be committed to the overall mission and extend support outside of traditional service tasks. Army space soldiers must not only focus on the Army and, even more importantly, Air Force space airmen must deliberately ensure their support is not disproportionately air-centric.

Further, even though the warfighter benefits from both military space and intelligence space, these communities have inherently different missions, requirements, customers, and organizational cultures. JP 3-14 has been narrowly myopic and has not leveraged the non-military space community in developing a truly joint, interagency construct.<sup>57</sup> Even if the military reaches consensus on joint theater space C2 construct, it will likely be viewed as a “military” solution much like the DIRSPACEFOR has been received as an Air Force solution. The evolving nature of space payloads from static utilities to dynamic taskable sensors makes this even more critical.

Second, unity of effort must be the mandate for space forces, not an unattainable desire for unity of command. Space power is inherently global. While global space forces can produce decisive theater effects, very few space capabilities can be controlled by a specific theater of operations without affecting other strategic, operational, or tactical missions. For this reason it is unrealistic to transfer OPCON of space forces to theater commanders. Also, even USSTRATCOM will only have unity of command for global military assets while the intelligence community will maintain control over its assets. Unity of command for all space forces is simply not feasible, nor should it be the goal.<sup>58</sup>

While the JFC may not have OPCON of space assets and unity of command is elusive, his requirements are paramount as the supported commander. The focus must be on

recognizing opportunities, generating requirements, and ensuring such requirements are properly prioritized in order to effectively translate requirements into theater space effects. Military and intelligence space experts must be physically in theater to understand the unique military operations first-hand and be involved at the proper integration point for all space users and suppliers.<sup>59</sup> The proper balance of space superiority and theater integration cells under the SCA as well as the proportion of embedded space operators is an area in need of further study. Combat-savvy operators must also be stateside in the JSpOC and various intelligence agencies to provide a knowledgeable interface.

Clearly, the supporting/supported relationships, direct liaison authorities (DIRLAUTH), reachback functions, and working relationships are critical to unity of effort. This “connective tissue” is necessary to get the joint, inter-agency players in synchronization to achieve global unity of effort.<sup>60</sup> Deliberate connectivity to the National Intelligence Support Team, Joint Intelligence Center, JSpOC, and other personnel should be premeditated.

## **RECOMMENDATIONS**

Collectively, the DIRSPACEFOR has been a significant step forward for space C2 but the full potential of space capabilities can be more fully realized by incorporating these aforementioned principles. The following recommendations are not only for the Joint Pub 3-14 rewrite, but also for general JFC consideration:

1.     Involve the Services *and* space agencies in operational C2 discussions at the earliest point. The C2 construct and JP 3-14 must be joint and interagency from the very beginning.
2.     The JFC should always be able to retain SCA or delegate it to a component.

Flexibility is paramount. In addition to current doctrinal factors, the “composition of the space users” should be added as a consideration.<sup>61</sup>

3. A joint, interagency DIRSPACEFOR-like construct should be adopted as the senior space officer in theater executing day-to-day responsibilities for the SCA, but the name should be abandoned—it has been irreversibly tarnished. The “Joint Interagency Space Coordinating Officer” or JIASCO name is an option.<sup>62</sup> Such a construct must be adopted by the other agencies, not just given the title as was the lesson with the “joint” DIRSPACEFOR.

4. The “JIASCO” and the theater space team must consist of joint, interagency space experts selected based upon qualifications. The practice of AFSPC using the DIRSPACEFOR as a wing commander grooming position for only single 4-month rotations should be terminated. Qualifications, not uniform or rank, must be the primary criteria.

5. Each component should not be permitted to form a DIRSPACEFOR-like position and staff. This will only undermine unity of effort resulting in conflicting “reach-back” requests to CDRJSO and dilute theater space efficiency. If the “JIASCO” and staff operate effectively, the components should only need liaisons, not their own service SCA or director.

## **CONCLUSION**

While this paper has uncovered the underlying parochial motivations that have inhibited progress on the rewrite to Joint Pub 3-14, it has also enabled a refocused perspective that frames the way ahead for the DIRSPACEFOR construct. By incorporating the principles of mission-focus and unity of effort with the DIRSPACEFOR construct, concrete recommendations have been put forward which, if followed, will provide a much clearer path to not only resolving the JP 3-14 DIRSPACEFOR issues, but also enable more optimal space support to the warfighter. This will be vital as space systems become more dynamically taskable and the space control mission continues to grow. Space is inherently global, joint, and interagency—and the space C2 construct must reflect these truths.

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<sup>1</sup> The Phase III Report of the U.S. Commission on National Security/21<sup>st</sup> Century, by Gary Hart and Warren B. Rudman, co-chairmen (Washington, DC: 15 February 2001), 78.

<sup>2</sup> Lance W. Lord, "Space Support to the Warfighter," High Frontier 1 (Summer 2005): 2.

<sup>3</sup> Dan P. Leaf, "Providing Combat Effects to the Battlefield," High Frontier 1 (Summer 2005): 4.

<sup>4</sup> U.S. Joint Chiefs of Staff, Joint Doctrine for Space Operations, Joint Pub 3-14, (Washington, DC: 9 August 2002), GL-6.

<sup>5</sup> Robert S. Dudney, "The Struggle for Space," Air Force Association Magazine 87 (March 2004). <<http://www.afa.org/magazine/may2004/0504edit.asp>> [29 January 2006].

<sup>6</sup> Amy Butler, "Perfect Harmony?" Aviation Week & Space Technology (4 April 2005), <[http://www.space4peace.org/articles/perfect\\_harmony.htm](http://www.space4peace.org/articles/perfect_harmony.htm)> [20 January 2006].

<sup>7</sup> Report of the Commission to Assess United States National Security Space Management and Organization, by Donald H. Rumsfeld, chairman (Washington, DC: 11 January 2001), 15.

<sup>8</sup> Benjamin S. Lambeth, Mastering the Ultimate High Ground, Santa Monica: RAND, 2003, 125.

<sup>9</sup> Report of the Commission to Assess United States National Security Space Management and Organization, 13.

<sup>10</sup> Lambeth, 129.

<sup>11</sup> Zalmay Khalilzad and Jeremy Shapiro, eds. United States Air and Space Power in the 21<sup>st</sup> Century, Chapter 5, Space Challenges, by Bob Preston and John Baker, Santa Monica: RAND, 2002, 156.

<sup>12</sup> Larry J. Dodgen, "Leveraging Space for Asymmetrical Advantage," The Army Space Journal 3 (Fall 2004): 5.

<sup>13</sup> Butler.

<sup>14</sup> Myron Hura, Gary McLeod, Jody Jacobs, Richard Mesic, Manuel Cohen, and Philip Sauer, Integration of Air and Space, Focus on Command and Control, Santa Monica: RAND, 2002, xiii.

<sup>15</sup> Butler.

<sup>16</sup> Jason Sherman, "England Orders Eight QDR Spin-Off Reviews," Inside Defense (10 January 2006), <[http://defense.iwpnewsstand.com/defensenewsstand\\_spclsubj.asp?s=qdr05](http://defense.iwpnewsstand.com/defensenewsstand_spclsubj.asp?s=qdr05)> [12 January 2006].

<sup>17</sup> Leaf, 4.

<sup>18</sup> Joint Pub 3-14, x.

<sup>19</sup> U.S. Air Force, Space Operations, Air Force Doctrine Document 2-2, Washington, DC: 27 November 2001, 29.

<sup>20</sup> Ibid.

<sup>21</sup> U.S. Joint Chiefs of Staff, Doctrine for Joint Operations, Joint Pub 3-0, Washington, DC: 10 September 2001, GL-8.

<sup>22</sup> AFDD 2-2, 31.

<sup>23</sup> Brian E. Fredriksson, "Space Power in Joint Operations, Evolving Concepts," Air and Space Power Journal (Summer 2004). <<http://www.airpower.maxwell.af.mil/airchronicles/apj/apj04/sum04/fredriksson.html>> [2 December 2005].

<sup>24</sup> Joint Pub 3-14, ix.

<sup>25</sup> Ibid.

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<sup>26</sup> Ibid., III-1.

<sup>27</sup> Larry D. James, “Bringing Space to the Fight: The Senior Space Officer in Operation IRAQI FREEDOM,” High Frontier 1 (Summer 2005): 14.

<sup>28</sup> Ibid.

<sup>29</sup> Todd C. Shull, “Space-Operations Doctrine: The Way Ahead.” Air & Space Power Journal 18 (Summer 2004). <<http://www.airpower.maxwell.af.mil/airchronicles/apj/apj04/sum04/shull.html>> [2 December 2005].

<sup>30</sup> Ibid.

<sup>31</sup> U.S. Joint Chiefs of Staff, Joint Doctrine and Joint Tactics, Techniques and Procedures for Air Mobility Operations, Joint Pub 3-17, Washington, DC: 14 August 2002, I-6.

<sup>32</sup> Shull.

<sup>33</sup> Jennifer Thibault, “AFSPC Airmen Support Recovery Efforts,” Air Force Print News Today, 6 September 2005. <[http://www.af.mil/news/story\\_print.asp?storyID=123011641](http://www.af.mil/news/story_print.asp?storyID=123011641)> [29 January 2006]. A DIRSPACEFOR also served under the JFACC in Joint Task Force-Katrina in September 2005.

<sup>34</sup> AFDD 2-2.1, 14. AFDD 2-2.1 does not use “JFASCC,” but states JFACC is an acronym for the “joint force air and space component commander” although it acknowledges the accepted acronym in JP 1-02 is simply “joint force air component commander.”

<sup>35</sup> AFDD 2-2.1, 14

<sup>36</sup> Ibid.

<sup>37</sup> FM 3-14 supersedes FM 100-18, dated 20 July 1995.

<sup>38</sup> Rick Dow, “Space Support Elements,” The Army Space Journal 3 (Fall 2004): 26.

<sup>39</sup> U.S. Army, Space Support to Army Operations, Field Manual 3-14, Washington, DC: 18 May 2005, 3-9.

<sup>40</sup> Michael J. Carey, “Integrating Space Capabilities in Support of the USCENTCOM Theater of War: A Challenge for the DIRSPACEFOR,” High Frontier 1 (Summer 2005): 18.

<sup>41</sup> Scott G. Patton, <[scott.patton@peterson.af.mil](mailto:scott.patton@peterson.af.mil)> “More DIRSPACEFOR Stuff,” [E-mail to Eric Krystkowiak <[eric.Krystkowiak@nwc.navy.mil](mailto:eric.Krystkowiak@nwc.navy.mil)>] 31 January 2006.

<sup>42</sup> Peter B. Teets, “Q&A Peter B. Teets, Undersecretary of the Air Force.” Interview by Michael Howard (April 2003). The Army Space Journal 2 (Summer 2003): 8.

<sup>43</sup> James K. McLaughlin, Director of Space Forces, US Central Command, telephone conversation with author, 11 January 2006. In CENTCOM, the DIRSPACEFOR is an Air Force colonel or brigadier general (four month rotation) while the deputy is an Army lieutenant colonel (one year rotations).

<sup>44</sup> Patton, “More DIRSPACEFOR Stuff.” Presented by Navy representative at 17 January 2006 JP 3-14 meeting at Pentagon, Washington DC.

<sup>45</sup> Ibid.

<sup>46</sup> U.S. Air Force, Air Force Basic Doctrine, Air Force Doctrine Document 1, Washington, DC: 17 November 2003, 5.

<sup>47</sup> AFDD 1, 4.

<sup>48</sup> Ed Zehner, “Rational for Space Control as an Army Mission,” The Army Space Journal 1 (Summer 2002). <<http://www.smdc-armyforces.army.mil/spacejournal/article.asp?aid=22>> [29 January 2006].

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<sup>51</sup> Michael J. Carey, Commander, 90<sup>th</sup> Space Wing, telephone conversation with author, 27 January 2006.

<sup>52</sup> Lambeth, 131.

<sup>53</sup> McLaughlin.

<sup>54</sup> The JSpOC conducts day-to-day planning and execution of space forces by translating global and theater requirements into an executable worldwide space tasking order (STO). This is also the point for theater space authorities to “reachback” for space support and effects.

<sup>55</sup> Scott G. Patton, Chief, Strategy, Doctrine & Policy, Headquarters Air Force Space Command, telephone conversation with author, 31 January 2006.

<sup>56</sup> Patton, “More DIRSPACEFOR Stuff.” Graphic developed by JSpOC.

<sup>57</sup> Lt Col Scott Patton validated that no non-military space partners have been involved in JP 3-14 rewrite.

<sup>58</sup> Fredrickson. He argues, “The JFSCC should exercise operational control over the resources of all the services and government agencies charged with providing space support to the warfighter. This will provide a single point of contact for JFCs and unity of command for space forces supporting them.” It is naïve to believe a military component commander could have OPCON of intelligence space assets.

<sup>59</sup> Carey. Col Carey uses the “proper point of integration” phrase to suggest functions should only be integrated at the point in which the missions are similar.

<sup>60</sup> McLaughlin. Col McLaughlin advocates for a space “connective tissue” like air side—e.g. battlefield coordination detachment (BCD), naval aviation liaison element (NALE), marine liaison officer (MARLO), air component coordination element (ACCE), etc.

<sup>61</sup> JP 3-14 states “mission, nature and duration of operation, preponderance of space capabilities, and the command and control capabilities”

<sup>62</sup> SCO currently used in Korea. This also eliminates the issue of the DIRSPACEFOR being a director in name only.